Carrying out a Planned Contact investigation

How not to crash and burn!

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Contact Investigation Process

- Pre-interview phase begins when medical report is received
- Index case interview
- Initial field investigations and contact interviews
- Medical assessments of high and medium priority contacts
- Evaluation of outcomes performed throughout the investigation

Contact Investigation Process

- Pre-interview phase begins when medical report is received
- Index case interview
- **The Plan**
- Initial field investigations and contact interviews
- Medical assessments of high and medium priority contacts
- Evaluation of outcomes performed throughout the investigation

Da plan! Da plan! What is da plan?

A CI plan is a detailed outline of steps worked out beforehand to accomplish objectives

- *Find exposed contacts*
- *Evaluate exposed contacts*
- *Treat infected contacts (to completion)*

Where do you record your contact investigation plan?

1. On the 502
2. In the index client medical record
3. In my head
4. In the contact investigation folder
5. Don't write down the specifics

The components of the CI plan

1. Prioritize transmission sites and contacts
   - Using the information you know to decide where the priority sites are
   - Understanding what 'vulnerable' means so contacts can be prioritized
2. Create a[n] ...es to be complete[d]
   - How qu... ...et this all done

The components of the CI plan

3. Determine logistics to complete evaluations
   - Who does TST/IGRA, CXR, medical evaluation?
4. Arrange for treatment for TBI as appropriate
   - Health department or private? INH, Rif, 3HP?, DOT?
5. Plan for data collection and documentation

List transmission settings form highest to lowest priority

1. Home
2. Workplace
3. Social
4. School
5. Congregate

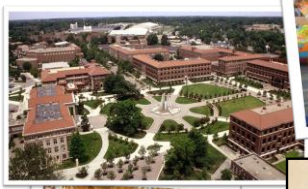
What is a home?




Where do people work?




Schools….




More on congregate settings




Contact Investigations in Special Settings

Challenges
- Communication
- Collaboration
- Potential for outbreak
- Damage control

Social setting could be just about anything and anywhere!

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Libraries
Organizational meetings

Extent of transmission possible AND The vulnerability of the contacts

And more……

2/13/14, 14 yo, smears +3 x 2, CXR, RUL opacities, cultures pos TB, basket ball and band, altar boy

Prioritize these sites:

1. "Get along" middle school
2. Household (sisters, ages 2,5,9), mom, dad and uncle
3. St. Michael Catholic Church
4. YMCA

67 yo, IT specialist, 6 mo cough of, fever, weight loss, TST neg, HIV+, CXR miliary, single, vocalist, smear neg, *Mtb* positive

Prioritize these sites:

1. Office cubicle at work, "International IT"
2. Clubs band performs
3. "Fancy Apartments", lives alone
4. Medical clinics recently visited

Symptomatic

HIV/AIDS

Children < 4

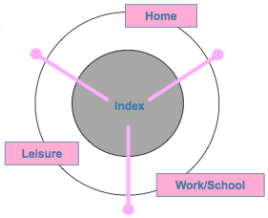
The Vulnerables

Transplants

TNF-α blockers

Priority level vs. Concentric Circle

- Current surrogates for estimating exposure do not truly predict chance of infection
- The vulnerability of the contacts are not accommodated
- Estimates for community prevalence are not known
- When prevalence is known, but high, end-point for the investigation is obscured



Prioritization of Contacts

Two considerations

1. Risk for infection
   - Exposure frequency
   - Exposure intensity

2. Risk for progression to disease
   - Children < 4
   - Transplant patients
   - HIV-infected/AIDS
   - TNFα antagonist
   - Other immunosuppressive conditions

Prioritizing tool for exposure duration

VDH recommendations for the cumulative time needed during the infectious period to assign the priority of contact based on environmental exposure

Space size	Example	High Priority	Medium Priority	Low Priority
Very small	Car, small office, 150 sq. ft.	8 or more hours	4 to less than 8 hours	Less than 4 hours
Small/medium	Classroom, meeting room	24 or more hours	12 to less than 24 hours	Less than 12 hours
Medium/large	Cafeteria, small church	50 or more hours	25 to less than 50 hours	Less than 25 hours
Large	Gymnasium, auditorium	100 or more hours	50 to less than 100 hours	Less than 50 hours

The less time exposed → the lower the potential for transmission → the lower the priority for evaluation of the contact

All 'vulnerable' contacts generally jump into the high priority column regardless of exposure limits

Table 1

Case Characteristics	Assignment of Contact Evaluation Priori Investig
Pulmonary, pleural or laryngeal	**High Priority**
Any of the following scenarios: • AFB smear positive • Cavitary CXR • Smear neg./culture pos. • ABN CXR consistent with TB/non-cavitary • Rapid test pos. or neg., culture pos.	• All household contacts • Anyone under 5 yrs old • Contacts with Medical Risk Factors: HIV, TNF alpha blockers, ESRD, long-term steroid use, cancer treatments or other immune compromising condition • Contacts exposed during a medical procedure: Bronchoscopy, sputum induction or autopsy • Contacts in a congregate setting (LTC, Detention facility) **OR** • Contacts exceeding environmental exposure limits for high priority contacts (See Table 2)

Complete 5 days from the initial encounter

Initial encounter within 7 days

Complete 10 days from the initial encounter

Who do you test first?

Contact Evaluation

- All Contacts: HIV testing and TST or IGRA
- Children < 4 years old
- HIV + individuals
- TB symptoms
- TST > 5 mm

  → Chest x-ray, Medical exam

- Any contact with TB symptoms or a suspicious Chest-Xray
  - Sputum exam X 3 (early morning specimens)
  - At least one healthcare worker observed
  - Induce for good specimens

Medium priority contacts: initial encounter in 14 days, evaluation within 10 days from the initial encounter

All things equal …. contacts of smear pos confirmed TB case. Now Prioritize

1. New wife
2. 12 mo old child living with first spouse
3. Weekly card game buddies
4. Mother, liver cancer
5. Best friend, HIV +

Estimate the infectious period

Admitted 9/13 with cough, fever x 6 weeks, Sputum, smear +, NAA Mtb +, RIPE started 9/24, Left AMA 10/4 with Rx for RIPE

1. Jul 26 – Oct 8
2. Jul 26 - ?
3. Jun 30 – Oct 24
4. Jun 30 - ?
5. May 3 - ?
6. May 3 – Oct 8

Last exposure date and the 2nd round of testing

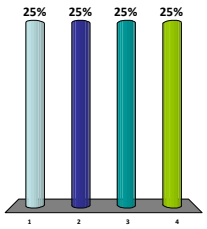
- Determine the last exposure date for each contact
- Perform the second TST or IGRA 10 weeks from that date, **The last exposure date is:**
  - The last day a contact was exposed to an infectious TB case, or
  - The last day an index case was at the same site as that contact, or
  - The last day of the infectious period for the index case

It is not 10 weeks from the first test

Who has the most recent date of last exposure?

Infectious period 10/20/13 – 4/25/14
All had initial test 5/3/14

1. Family who visited for Christmas
2. Coworkers at employment site which ended 1/17/14
3. Family he lives with
4. Old friend seen at reunion 5/11/14

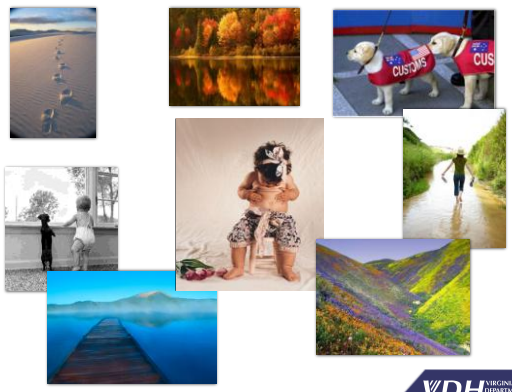


Evaluation of Contacts with Documented Previous Positive TST

- Gather background health/psychosocial information
- Determine current risk for progression to disease
- Assess for symptoms of active TB. If present:
  - Medical evaluation
  - Chest x-ray
  - Sputum for AFB x 3
- Provide education
- Individualize treatment for each contact

Treatment for TB infection

Window period treatment	Treatment for TB Infection
•Treatment for vulnerable populations to prevent rapidly emerging TB disease •When second skin test is read, decision to complete treatment is reconsidered •A full course of treatment may be recommended even with a negative TST/IGRA	•Test with the expectation to treat if infected •Create a sense of urgency •Utilize 3HP when possible Virginia's 2014 expectation 75% of contacts will begin treatment/72% will complete



Next up - Evaluating Contact Investigation Activities